STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7628

Joint Petition of Green Mountain Power Corporation, Vermont Electric Cooperative, Inc., and Vermont Electric Power Company, Inc. for a certificate of public good, pursuant to 30 V.S.A. Section 248, to construct up to a 63 MW wind electric generation facility and associated facilities on Lowell Mountain in Lowell, Vermont, and the installation or upgrade of approximately 16.9 miles of transmission line and associated substations in Lowell, Westfield and Jay, Vermont	))))))))))

Order entered: 7/19/2011

ORDER RE FIRST SET OF COMPLIANCE FILINGS

INTRODUCTION

On May 31, 2011, the Public Service Board ("Board") issued an Order (the "Order") and Certificate of Public Good ("CPG") in this docket approving, subject to certain conditions, the construction and operation of the proposed wind electric generating facility. Among other things, the Order required the Petitioners to make a number of post-certification compliance filings. On June 6, 2011, the Petitioners submitted their first set of compliance materials for party comment and Board review. The June 6, 2011, filing included: (1) the final design plans for the project, including a summary of project changes incorporated into the final design; (2) an aesthetic analysis related to project changes; (3) a natural resource analysis related to project changes; (4) a noise analysis related to project changes; (5) a proposed final blasting plan; (6) a revised project budget; and (7) a list of collateral permits and their status.

In this Order we approve the Petitioners' final design plans, with the exception of the Obstacle Collision Avoidance System ("OCAS") tower, and direct the Petitioners to file an amended blasting plan.

1. Final Design Plans

Condition 2 of the CPG states:

> The Petitioners shall file for Board approval design-detail plans with the parties and the Board for major project components, including access roads, the crane path, collector lines, turbines, the step-up substation, and the various elements of the Transmission Component. Parties will have two weeks, from the date each set of plans is filed with the Board, to comment on the plans. The Petitioners cannot commence construction until the plans are approved.

The final design plans filed on June 6, 2011, reflect a number of changes throughout the project. The Petitioners summarize them as follows:

Turbine Selection and Relocation

The Petitioners have selected the Vestas V112 3.0 ("V112") turbine as the model they will use for the project. The Petitioners assert that the V112 is the most efficient of the turbine models studied, so that while it may have the highest overall cost, the increased energy output results in the lowest levelized cost of project power, larger projected payments from the Good Neighbor Fund and school tax payments pursuant to 32 V.S.A. § 5401c.

GMP has revised the turbine locations (resulting in consequent changes to the turbine pad and crane path locations) to maximize power output. Turbine 15 has been moved from the spur to a location closer to the crane path. Turbine 2 will be moved away from a wetland area. There will also be smaller turbine pads for all turbines.

Changes were made in response to requirements related to the wetlands and stormwater permitting processes. These include changes to project stormwater features, relocation of a portion of the project's collector line and a reduced impact on ridgetop wetlands. The final designs are the final INDC and INDS stormwater designs.

The operations and maintenance building at the wind farm site will increase in size (from 30 x 70 feet to 50 x 100 feet) to accommodate the requirements of the selected turbine and to provide adequate tool storage, spare parts inventory and work space within the facility for the selected turbine's larger components.

The Petitioners made minor design changes in the final designs for the KCW collector substation.[1]

Transmission Laydown Areas

There are two new transmission line laydown areas, to be used as staging areas for the transmission line improvements and location of equipment and vehicles. The first area is in Lowell, Vermont, and consists of a one-acre parcel in a grassy field owned by the Roman Catholic Archdiocese, located between Route 100 and the Pion auto salvage yard. The second area consists of a 1.9-acre parcel in a field behind the Degre Auction House on the easterly side of Route 100 in Westfield, Vermont.[2]

Temporary Jay #17 Substation

GMP had planned to use a mobile substation at the site of the Jay #17 substation during the period that the Jay #17 substation was being rebuilt. However, due to tight clearances that became apparent during final substation design, there is insufficient room to use a mobile substation at that location. GMP therefore proposes to construct a temporary substation to use during the eight-month period when the Jay #17 substation will be out of service. The temporary substation would be located 300 feet north of the existing Jay #17 substation and would be connected by a 46 kV feed from the north. The footprint of the temporary substation would be approximately 36 x 57 feet and would consist of the following components:

- Gravel placed over Marafi filter fabric allowing restoration of the site once the gravel and the filter fabric are removed;
- 7.5 mVA transformer (used from GMP stock) with a temporary oil containment system;
- Poles to carry the conductors; and,
- Various switches, disconnects, arresters, fuses, and associated equipment.

The temporary substation will have an oil containment system consisting of a rubber boom and containment laydown material for primary and backup protection surrounding the transformer, which will be sufficient to contain the entire volume of oil used in the temporary substation transformer. The temporary substation will not be lit. If after-hours work is required, GMP will provide portable lighting devices regularly used by utility crews. Once the Jay #17 substation work is complete, the temporary substation will be decommissioned in

1. Attachment A at 1.
2. Attachment A at 2-3.

accordance with good utility practices. Decommissioning will include removal and disposal of all existing structures, return of the equipment at the temporary substation to stock, removal of the gravel base and Marafi filter fabric, and restoration of the site to its prior condition, including any necessary remediation of the area and the addition of top soil and reseeding, all in accordance with a reclamation report to be filed with the Board. Because the proposed temporary substation will sit on the ground rather than on a foundation, its construction will involve no permanent earth disturbance, will require no tree cutting, and is not expected to have any more natural resource impacts than the mobile substation it replaces. GMP is in the process of entering into an agreement with the landowner where the temporary substation will be located.[3]

Collector Line Relocation

Modifications have been made to the collector line that avoid some wetland impacts. The Petitioners assert that these revisions have eliminated over ½ acre of wetland impacts with no material impact to projected costs. The altered routing is identified on the collector line change drawings and a table showing original and revised pole height is included.[4]

Transmission Line Relocation

There are several 46 kV transmission line route alterations, principally as a result of discussions with landowners. A number of pole heights have been altered to accommodate the design alterations of the transmission plans.

The final reconductoring to the Velco Jay Tap substation has not changed from what was originally proposed. For the sake of convenience, Petitioners included an additional copy of Exhibit Pet. DPE-17 to serve as the final design for this particular project element.[5]

Substation Final Design Changes

Due to equipment clearances and final design review, GMP has changed each substation slightly. The changes to the substations do not affect their footprints; however, Lowell #5 and Jay #17 are slightly taller.

The specific changes to the substations are as follows:

3. Attachment A at 5-6.
4. Attachment A at 6.
5. Attachment A at 6.

a. Jay #17 Substation.

GMP has added 12 kV lightning protection masts to the 12 kV structure, increasing the height of the 12 kV structure by approximately 11 feet. This change does not increase the overall height of the substation as the 12 kV masts are nine feet below the height of the 46 kV lightning masts.

b. Lowell #5 Substation.

GMP has added a concrete pad for a ground-mounted station service transformer, a propane generator for emergency station service, and increased the height of the steel structure by five feet, increasing the overall height of the substation elements to 42 feet to provide better clearances for the substation transformer fuses.

c. KCW Substation.

GMP has increased the width of the 34.5 kV bay from 15 feet to 18 feet to allow for better working clearances when working on an energized substation, provided a storage area for a backup transformer, moved the DVAR unit to the other side of the substation structure to allow for the storage of the backup transformer, relocated the control house, and added provisions for a backup propane-fueled generator.[6]

Temporary 46 kv Feed from Velco Line

Due to uncertainties in equipment acquisition, the project will require a temporary feed from the VELCO 46 kV line to the permanent transmission line running along Cross Road in Jay, Vermont. This temporary feed will be installed for 10 months immediately east of the permanent connection point to the VELCO 46 kV system. This temporary feed will consist of a single pole and 46 kV conductor. As with the temporary Jay #17 substation, the need for this temporary installation was discovered in the final transmission design process and construction scheduling. It is designed to allow Project transmission upgrades without affecting local distribution customers. When the permanent support structure is installed, the temporary pole will be removed and returned to storage.[7]

As noted in the Introduction to this Order, the Petitioners also submitted: (1) an aesthetic analysis related to project changes; (2) a natural resource analysis related to project changes; and, (3) a noise analysis related to project changes. Each of these documents was submitted in

6. Attachment A at 6-7.
7. Attachment A at 7.

support of Board approval of the final design plans, and is intended to demonstrate that the project changes reflected in the final design plans do not create significant adverse aesthetic, natural resource, or sound impacts.[8] We will address each of these topic areas individually below.

A. Project Changes and Aesthetics

The Petitioners' aesthetics witness, Mr. Raphael, prepared a supplement to the aesthetics assessment that he previously performed and prefiled as an exhibit to his testimony in this proceeding. In the supplement, Mr. Raphael concludes that the project changes set forth in the final design plans are generally minor revisions that do not, individually or taken together, constitute a substantial change or alter the overall conclusion in his initial assessment that the project does not have an undue adverse impact on aesthetics.

Craftsbury and Albany (the "Towns") contend that the Petitioners' supplemental aesthetics report filed June 6, 2011, is "misleading and insufficient." The Towns contend that Mr. Raphael incorrectly describes the differences between the V112 and the previously modeled GE turbines. The Towns contend that the blade length on the V112 actually results in it being approximately 36 feet taller than the GE turbines with a blade in the vertical position, and not the 16.6 feet claimed by Mr. Raphael in the supplement. The Towns assert that this amounts to an overall height difference of more than 10% and that the one simulation submitted by Mr. Raphael that purports to show the difference between the previously-modeled turbines and the V112 is insufficient because it does not appear to show that 10% difference. The Towns further criticize the filing as insufficient for its failure to include a visibility map, asserting that the height of the V112 will only make the turbines more visible and that such a visibility map is required by Board Rule.[9] The Towns also argue that selection of the V112 turbine requires a change in turbine spacing and placement along the ridgeline, and that Mr. Raphael fails to address what impacts

8. Letter, Peter H. Zamore, Esq., to Susan M. Hudson, Clerk, dated 6/6/11 at 1.
9. Towns Reply to GMP filed 6/30/11 at 6.

this change in location may have on the original layout's visual order. The Towns request additional process and hearings to address their stated concerns.[10]

Lowell Mountains Group, Inc. ("LMG") argues that the supplemental aesthetics analysis fails to properly account for the 10% difference in overall turbine height, and that the Petitioners should be required to analyze the impacts of the taller towers on the area's aesthetics. LMG asserts that additional hearings are necessary to determine these impacts.[11]

The Department of Public Service ("Department" or "DPS") commented that the overall height difference of 16.6 feet resulting from the new design was acceptable, that the shifts in turbine placement shown on the final engineered drawings are minor and, in some instances (particularly turbine 15), might reduce the aesthetic impacts of the project, and that the changes in pole heights and slight alignment adjustments of the collector systems do not appear to be substantial. The Department recommends that the Petitioners' commitment to reduce straight line effects in the collector system corridor through "feathering" practices be validated through post-construction review. The DPS does not believe the two new temporary laydown areas will be visually obtrusive, but recommends that each laydown area be graded and seeded as necessary to restore the sites to as close to original conditions as practical. The DPS asserts that transmission line modifications (including alignments and pole heights) are also minor and do not alter the Department's conclusions regarding aesthetic impacts. Lastly, the Department states that the substation changes, including the addition of a temporary Jay #17 substation, have limited aesthetic impact.[12]

The Petitioners respond that neither the Towns nor LMG have demonstrated that the project design changes raise a significant issue with respect to aesthetics. They argue that the Towns and LMG spend significant time focusing on a "few discrepancies in the narrative description" of the changes resulting from their selection of the V112 turbine model.[13] The

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10. Towns Comments filed 6/20/11 at 4-10.

11. LMG Comments filed 6/21/11 at 6-7.

12. DPS Comments filed 7/1/11 at 1-2.

13. The Petitioners' expert, Mr. Raphael, did include factual errors in his supplemental report with respect to the hub height and rotor diameter of the two turbine models being discussed. However, these errors were corrected in the Petitioners' June 10, 2011, filing, and, as discussed below, Mr. Raphael's ultimate conclusion in the June 6, 2011, (continued...)

Petitioners also assert that the aesthetic impacts of the V112 were addressed during the rebuttal phase of this proceeding and thus were fully subject to discovery, surrebuttal testimony and cross-examination. The Petitioners assert that their exhibit Pet.-DR-10 shows that the difference in visual impacts between the V112 and two other turbine models under consideration at the time is minimal. According to the Petitioners, the Towns and LMG have not demonstrated that the June 6, 2011, filing raises any significant issues with respect to aesthetics, and they therefore argue that the final design plans should be approved and the Towns' and LMG's requests for additional process and technical hearings should be denied.[14]

We agree with the Petitioners and the Department that the project design changes, including the selection of the V112, do not raise any significant issues with respect to aesthetics, and that additional process is not warranted. While the Towns and LMG made much of the limited difference in turbine height between the V112 and the other models, we do not share their concerns. First, the Towns' and LMG's arguments fail to acknowledge that the V112 model was actually presented to the Board for consideration during the pre-certification phase of this proceeding. Its visual impacts were already considered by the Board in rendering its decision. Additionally, careful review of the materials filed shows that the V112's additional height to the tip of the blade is just over 16 feet, and not the 36 feet claimed by the Towns and LMG. This is because the 36 feet relates to rotor diameter, not the length of the individual blades.[15] Additionally, the towers themselves will actually be approximately three feet shorter, meaning the most substantial portion of the structures will be less visible. The only increase in visibility will be due to a slightly longer blade. And, while some locations that did not previously have visibility may experience visibility with the V112 model, that new visibility would only include,

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13. (...continued)
filing that the overall height increase is approximately 16 feet as a result of the selection of the V112 model is correct.

14. GMP Response to Towns and LMG at 3-4.

15. In fact, if the figures cited of 100 and 112 meters applied to blade length instead of rotor diameter, it would be problematic indeed, since the hub heights for the two towers in question are only 85 (GE) and 84 (Vestas) meters. It is also unclear to the Board why the Towns and LMG contend that there will be a more than 10% difference in overall height when comparing the V112 to the GE 2.5 xl. The GE model is 443 feet from base to blade tip, requiring an increase of 44.3 feet to equate to a 10% difference in height. Even if the Towns weren't confused over the difference between rotor blade length and rotor diameter, a 36-foot increase in height falls shy of the 10% the Towns and LMG claim is implicated by the choice of the V112 model.

at most, approximately 16 feet of tapered blade sections. These incremental impacts are limited and not significant enough to require additional process or hearings, especially given that the V112 model was previously subject to review in these proceedings.

With respect to the realignment of the turbines along the ridgeline, we concur with Mr. Raphael's assessment as well as that of the Department. The final design plans do not show any significant alteration in the overall symmetry and balance of the array, and as noted by the Department, the relocation of turbine 15 may even lessen aesthetic impacts by bringing it more in line with the other turbines.[16]

Lastly, with respect to the Town's request that the Petitioners be required to file a revised viewshed map, we conclude that such a requirement is not warranted. The record adequately addresses areas of potential visibility based on expert testimony and exhibits. The slight increase in overall height that results from the larger rotor diameter will not result in any significant visual changes to the character of the area that have not already been considered by the Board. Additionally, contrary to the Towns' assertion, Board Rules do not require a new viewshed analysis to be submitted as part of a compliance filing. Rule 5.403(B)(3) requires that a viewshed analysis be filed with the petition, which was done in this proceeding. That requirement does not apply to compliance filings.

In order to justify the additional process and technical hearings that the Towns and LMG claim are necessary, they must "demonstrate that the compliance filing raises a significant issue that was not, and could not reasonably have been, adequately addressed during the pre-certification hearings."[17] The V112 model, and its visual impacts when compared to the previously modeled turbines, was first presented in the Petitioners' rebuttal testimony, including an exhibit which compared the aesthetic impacts of the V112's height to two other models under consideration from distances of one, 2.5 and five miles.[18] We agree with the Petitioners that the exhibit shows that the incremental aesthetic impact of selecting the V112 is minor. Additionally, given that they had the opportunity to address this issue previously in this proceeding, the Towns

16. *See* Final Civil (marked) of final design plans submitted by Petitioners on June 6, 2011.
17. *Petition of UPC Vermont Wind, LLC*, Docket No. 7156, Order of 5/14/08 at 6.
18. Exh. Pet.-DR-10.

and LMG have failed to demonstrate that additional process is warranted during the compliance phase of this Docket.

The Towns and LMG restricted their comments to the selection of the Vestas V112, and have not commented specifically on the aesthetic impacts of other design changes submitted by the Petitioners, such as transmission line modifications, the additional laydown areas and the proposed temporary substation. The only party to comment specifically on the aesthetic impact of all design changes was the Department, which opined that the changes did not create the potential for significant aesthetic impacts. We agree, and conclude that the final design plans filed by the Petitioners do not raise any significant issues with respect to aesthetics, provided that the Petitioners employ the feathering practices that they described, and that the laydown areas are restored to their original conditions to the extent practical as recommended by the Department. The Board will retain its jurisdiction to inspect the Petitioners' compliance post-construction, and to order any additional mitigation it deems necessary and appropriate in these locations.

B. Project Changes and Natural Resource Impacts

The Petitioners' environmental consultants prepared supplemental reports assessing the potential natural resource impacts from the changes reflected in the final design plans. The Petitioners' consultants concluded that the changes in the final design plans resulted in either the same level of impacts to natural resources, or in some instances, a reduction of the impacts previously identified, when compared to the plans presented during the technical hearings.

Only ANR filed comments regarding potential natural resource impacts arising from the design changes described in the Petitioners' June 6, 2011, compliance filings materials. In comments filed June 21, 2011, ANR states that the temporary Jay #17 substation raises no issues related to wildlife, and that the relocation of turbine 15 decreases impacts to necessary wildlife habitat. ANR also has reserved its right to comment on the potential OCAS tower location until after the Petitioners' environmental consultant performs a natural resource assessment of the impacts of the tower. Finally, ANR indicates that the Petitioners provided the Stormwater Program with the final design changes, which resulted in a minor change to treatment in several

locations. The Stormwater Program will review and incorporate the final design plans into any final decision regarding the operational and construction phase stormwater permits.[19]

On July 1, 2011, ANR filed supplemental comments that again addressed the potential placement of an OCAS tower. ANR notes that the May 31, 2011, Order requires GMP to file a request for Board approval for placement of the OCAS tower, but the Order does not establish a process for the review and approval of such a request. ANR further notes that the area containing one potential location for the OCAS tower is forested with Montane-Spruce-Fir Forest, a natural community type that is already being impacted by the project. ANR asserts that a full environmental assessment must be provided, and requests that it and other parties be afforded the opportunity to fully participate in the evaluation of any proposed OCAS tower and its impacts.[20]

In response to ANR's comments, GMP states that it agrees with ANR, and that in the event use of the OCAS system is approved for the project, it will file a complete evaluation of all Section 248 impacts for review by the parties and appropriate process before the Board.[21]

Based on the supplemental analyses performed by the Petitioners' environmental consultants, and the comments and supplemental comments filed by ANR, we conclude that, with the exception of the potential placement of an OCAS tower, the changes reflected in the final design plans do not raise a significant issue with respect to impacts to natural resources. In the event the FAA allows the use of the OCAS system at the project site, we will, consistent with GMP's representations, require GMP to file with the Board and serve on the parties a complete Section 248 analysis with respect to impacts from the OCAS tower. Parties with standing on individual issues will have two weeks from the time that analysis is filed to submit comments and propose a suitable process for review of the materials.

C. Project Changes and Noise Impacts

The Petitioners' noise consultant updated its sound propagation model utilizing the Vestas V112 turbines and the new turbine configuration to determine if the project in its final design

19. ANR Comments filed 6/21/11.
20. ANR Comments filed 7/1/11.
21. GMP Comments filed 7/1/11 at 4.

would meet the sound standard the Board imposed in the May 31, 2011, Order. According to the Petitioners' consultant, the V112 in the 21-turbine configuration reflected in the final design plans would result in sound levels at least 2 dBA below the Board's 45 dBA (exterior)(Leq)(1hr) standard at the nearest residences to the turbines.

The Towns argue that the Board should disregard the updated sound propagation modeling performed by the Petitioners' consultant because the individual (Mr. Duncan) who produced the memorandum and attached figures and tables was not the same individual (Mr. Kaliski) who appeared as the witness during these proceedings. The Towns further assert that the Board should give no weight to the consultant's conclusion that the project will not have an impact on health nor an undue adverse impact on aesthetics because those statements are not supported by the record. The Towns also state that the Petitioners could have selected a quieter turbine, and that there is only a slim margin of error for the V112 to meet the noise standard set by the Board. The Towns also suggest that the updated noise analysis implies that the Petitioners may attempt to evade the Board's noise standard and use a less stringent one based on WHO guidelines. Lastly, the Towns claim the noise analysis indicates that the Board's indoor standard will not be met and that further process, including technical hearings, is required.[22]

GMP responds that evidence of the sound levels expected to be produced by the V112 was prefiled in the evidentiary record during the rebuttal phase of the proceeding and that it was therefore already litigated. GMP further asserts that no significant issues are raised by: (1) the fact the noise update was provided by an associate of Mr. Kalisiki, rather than Mr. Kaliski himself; (2) the fact that the V112 is not the quietest of the turbines considered; and (3) the state of the evidentiary record on whether the interior noise standard will be met.[23]

At the outset, we note that the Towns appear to be attempting to relitigate issues already decided in this proceeding. Their arguments regarding health and aesthetic impacts from noise as well as the state of the evidentiary record with respect to the indoor component of the noise standard were already considered by the Board and appear to be an attempt to argue for

22. Towns Comments filed 6/20/11 at 11-16. Towns Reply to GMP filed 6/30/11 at 6-7.
23. GMP Response to Towns filed 6/24/11 at 4-5.

amendment of our May 31 Order.[24] Accordingly, it is not clear why the Towns included these arguments in their comments on a compliance filing. With respect to the sound levels expected to be produced by the V112, they were modeled as part of the rebuttal phase of the proceeding and the Towns had ample opportunity to propound discovery, file surrebuttal testimony and cross-examine the Petitioners' witness on the issue. Following review of the evidentiary record and consideration of the parties' various positions, the Board determined that the V112 was capable of meeting the Board-imposed noise standard. In short, use of the V112 was approved and the Towns' arguments, including their argument that quieter turbines were available, are unavailing.[25] Therefore, the only issue associated with the sound levels expected to be produced by the V112 implicated by the filing of the final design plans is whether the turbine realignment would cause the Board-imposed standard to be violated. The information submitted by GMP indicates that the turbines will still meet the standard after realignment of the array.

Additionally, the Towns' assertion that the updated sound analysis must be ignored because it was not presented by Mr. Kaliski fails to raise a significant issue with respect to the filing. They do not actually assert that Mr. Duncan is unqualified nor do they point to any information that would indicate such an issue.[26] With respect to the sound update itself, the memorandum indicates that it was performed consistent with the methodology utilized by Mr. Kaliski throughout the proceeding. Accordingly, we discern no significant issue with Mr. Duncan having performed the noise update.

The Towns' concerns about the project meeting the interior component of the noise standard and the Petitioners possibly seeking to exempt themselves from the Board's noise standard in favor of a less stringent standard are both unfounded. The project must meet the Board-imposed standard or the Petitioners will have to make operational adjustments to ensure

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24. We note that the Towns included the same or similar arguments in their motion for reconsideration of the May 31, 2011, Order.

25. We note that the Petitioners have represented that the V112 is the most efficient of the turbines considered, and that its use will decrease the cost of power produced by the project. If that is in fact the case, then use of a less noisy, but less efficient turbine, would likely not constitute reasonable mitigation. We discuss the amended cost estimates for the project later in this Order.

26. In fact, the memorandum prepared by Mr. Duncan indicates that he is Institute of Noise Control Engineering Board Certified.

that it does. Failure to meet the standard will be a violation of the CPG governing operation of the project.

Accordingly, we conclude that the changes reflected in the final design plans do not raise a significant issue with respect to noise impacts and have determined that the Towns have failed to demonstrate that additional process is warranted.

D. Project Changes and Archaeological Impacts

On June 10, 2011, the Petitioners made their second round of compliance filings. Included in that round of filings was an archaeology report covering the two new proposed transmission laydown areas and the site for the temporary Jay #17 substation. Because this report implicates our ability to review and approve the final design plans, we are addressing it here, rather than in an Order covering the June 10, 2011, set of compliance filings. The Petitioners' consultant inspected each of the three areas and determined that they sites were not archaeologically sensitive and no further action was recommended. No parties commented on the report.

Based on the archaeology report filed on June 10, 2011, we conclude that the changes reflected in the final design plans do not raise a significant issue with respect to impacts to archaeological or historic resources.

Based on the foregoing discussion, the Petitioners' final design plans are approved with the exception of the placement and construction of the OCAS tower. In the event the FAA allows the use of the OCAS system at the project site, GMP must file with the Board and serve on the parties a complete Section 248 analysis with respect to impacts from the OCAS tower. Parties with standing on individual issues will have two weeks from the time that analysis is filed to submit comments and propose a suitable process for review of the materials. GMP may not begin site preparation or construction of the OCAS tower until it is approved by the Board.

2. Proposed Final Blasting Plan

The CPG contains the following conditions related to blasting activities at the project site:

35. Blasting associated with construction of the proposed project shall be minimized to the extent practicable and performed only during the hours of 9:00 A.M.- 5:00 P.M., Monday-Friday, with the exception of State holidays.

36. All blasting shall be carried out by licensed and certified blasting technicians. All blasting will be performed in accordance with any and all applicable laws and regulations, including, but not limited to, U.S. Department of Interior Rules 816.61-68 and 817.61-68 and the Blasting Guidance Manual, Office of Surface Mining, Reclamation and Enforcement, U.S. Department of Interior to limit peak particle velocity and ground vibration to safe levels. Noise and air blast effects shall be limited through application of proper techniques and blasting mats will be used where needed to limit the occurrence of flyrock.

37. Prior to performing any blasting for the proposed project, the Petitioners shall develop and file for Board approval, a blasting plan that includes a pre-construction survey of any residential or agricultural water sources within one-half mile of any proposed blasting site, and will arrange for a public information session with surrounding landowners to address concerns related to blasting. Parties with standing on this issue will have two weeks, from the date this plan is filed with the Board, to comment on the plan. The Petitioners cannot commence any blasting activities until the plan is approved.

38. In the event surrounding landowners express concern regarding the impacts of blasting on wells or other structures on their property, the Petitioners shall perform evaluations to determine if any damage has occurred as a result of blasting activities and, if so, remediate any such damage.

As part of their June 6, 2011, compliance filing, the Petitioners included a proposed Final Blasting Plan (the "Plan") and map intended to implement the requirements of Condition 37 of the CPG.

ANR filed comments on June 21, 2011, stating that the Plan "fails to address drilling, blasting, crushing or haul road dust emissions."[27] ANR recommends that all rock-drilling operations be equipped with either wet or dry dust emission controls to control fugitive particulate matter. With respect to blasting, ANR states that prewetting of overburden material prior to blasting can provide some level of dust control. ANR notes that the Plan makes no

27. ANR Comments filed 7/1/11 at 1.

reference to on-site rock processing operations that may follow blasting. ANR states that for any rock crushing, screening, conveying, or other processing operations the Petitioners "would be expected to take reasonable control measures to minimize fugitive dust," and such measures would include "wet suppression or fabric filter pick up points at fugitive dust generating points such as crusher discharges, conveyor transfer points and screen outlets."[28] Lastly, ANR recommends that wetting, sweeping and chemical treatments such as chloride be utilized to control haul road and other traffic area dust emissions.[29]

By letter filed July 12, 2011, GMP indicated that its blasting contractor would utilize drills with a water injection system to minimize dust while drilling, and that its general contractor would undertake dust control measures at the project site sufficient to meet ANR's requirements. According to GMP, ANR has agreed that no amendment to the blasting plan is necessary.[30]

LMG filed comments on June 30, 2011, stating that the Board should require GMP to "provide an assessment of the impact the blasting and use of blasted material will have on the surrounding wetlands, and evidence of the anticipated composition of the blasted material."[31]

We have reviewed the Plan and have identified two concerns that the Petitioners will need to address in an amended filing. First, as a general matter, while Condition 37 contains the requirement that a blasting plan that includes a pre-construction survey of any residential or agricultural water sources within one-half mile of any proposed blasting site be filed for Board review and approval, there are a number of other requirements in the conditions related to blasting activities. While some of these requirements are addressed in the Plan, others are not. We believe that it would be useful for any plan covering blasting activities for the project to contain all blasting-related requirements. Requirements included in Conditions 35-38 that were not addressed by the Plan are as follows:

1. The Petitioners will arrange for a public information session with surrounding landowners to address concerns related to blasting.

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28. ANR Comments filed 7/1/11 at 1.
29. ANR Comments filed 7/1/11 at 2.
30. Letter, Peter H. Zamore, Esq., to Susan M. Hudson, Clerk, dated 7/12/11 at 1.
31. LMG Comments filed 6/30/11 at 1.

2. In the event surrounding landowners express concern regarding the impacts of blasting on wells or other structures on their property, the Petitioners shall perform evaluations to determine if any damage has occurred as a result of blasting activities and, if so, remediate any such damage.

We direct the Petitioners to amend the Plan to include these requirements because their omission leaves an incomplete picture of the CPG's blasting requirements for someone reviewing the Plan. Additionally, as it currently stands, the Plan only requires a pre-blast survey of water supplies. However, Condition 38 makes clear that if blasting damages "wells or other structures" on surrounding landowner properties, then the Petitioners must remediate any such damage. Necessarily implicit in this requirement is that pre-construction surveys will need to document not only water sources within a half-mile of the project site, but will also need to document existing conditions at structures within that radius as well.

Second, we are concerned with the lack of specificity regarding notice to property owners regarding the pre-blast surveys. The Plan states only that "appropriate notices will be given" to property owners within a half-mile of the project site. Similar language was proposed in *Georgia Mountain* and was deemed insufficient by the Board. In that case we directed the petitioner to,

> at a minimum, send a certified letter, with return receipt requested, to each property owner within one-half mile that explains why pre- and post-blast surveys and well monitoring is being offered and provide the contact information for a person that is able to answer questions that property owners may have regarding the notice and surveys.[32]

We also requested the petitioner in *Georgia Mountain* to file copies of the certified mail return receipts with the Board.

Consistent with our decision in *Georgia Mountain*, we will require the Petitioners to, at a minimum, send a certified letter, return receipt requested, to each property owner within one-half mile of the project site. The letter must explain why pre- and post-blast surveys of water sources and other structures are being offered and provide contact information for a person that can answer questions that property owners may have regarding both the notices and surveys. Copies of the return receipts must be filed with the Board.

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32. *Petition of Georgia Mountain Community Wind*, Docket 7508, Order of 4/11/11 at 5.

ANR's comments and recommendations with respect to the Plan go beyond the topic of blasting, which the Plan is required to address, and also include control of dust from drilling, rock crushing and haul-road emissions. Based on GMP's representation that it has reached agreement with ANR on dust-control measures at the project site, we are not directing any further amendments to the Plan.

LMG's comments effectively seek to reopen the evidentiary record in an attempt to raise an issue that could have been raised during the pre-certification phase of this proceeding.[33] The project's impacts on surrounding wetlands have already been assessed and, with the conditions included in the CPG, have been found to be not unduly adverse. LMG has failed to demonstrate why the record should be reopened on this issue and we decline to impose the group's recommendation.

GMP shall file an amended blasting plan reflecting the changes discussed above.

3. Revised Project Budget

Included with the required compliance filings made on June 6, 2011, was a revised project budget to reflect the selection of the Vestas V112. According to the Petitioners, selection of the Vestas V112 increases the estimated capital costs of the project by 13%. However, the Petitioners also state that the V112 is the most efficient of the turbines considered, and as a result, the levelized cost of power produced by the project decreases from $0.103 per kWH to $0.092 per kWH. The decrease in levelized cost is due, according to the Petitioners, to an increase in capacity factor of approximately 20% from the previously modeled turbines.

On June 20, 2011, the Towns filed comments on the revised project budget. The Towns assert that there is no basis in the evidentiary record to support the Petitioners' claim that an increase in the capacity factor of the V112 turbines would offset project cost increases and result in a decrease in the levelized cost of power. The Towns argue that GMP should have provided this information during the pre-certification phase of the proceeding since the V112 was under

33. LMG's comments assume that there will be blasted serpentine rock at the project site. However, there is no evidence in the record to support such an assumption. The only evidence in the record regarding serpentine rock is related to the serpentine outcrop formations in the Lowell area, which are extremely rare and none of which are located where blasting activities will occur.

consideration as early as November of 2010, and that additional process, including technical hearings, is necessary to assess the cost-effectiveness of the project in light of the newly-disclosed cost increases.[34]

On June 21, 2011, LMG filed comments on the revised budget, asserting that the true costs of the project are not yet known, that the revised capacity factor is not supported by record evidence, and that additional process, including technical hearings, is needed to determine the true economic impacts of the project.[35]

On July 1, 2011, the DPS filed comments on the revised budget recommending that the Petitioners identify the basis for the increased capacity factor and provide any documentation supporting their analysis.[36]

GMP responded to the Towns' and LMG's comments in its Response to Motions of Towns of Albany and Craftsbury and Lowell Mountains Group for Additional Discovery, Evidentiary Hearings and Other Relief.[37] GMP argues that the rate impacts of the proposed project are beyond the scope of intervention of both the Towns and LMG. Additionally, GMP asserts that neither the Towns nor LMG raise a significant issue in their comments and therefore their requests for additional process should be denied. GMP argues that a decrease in per kWH costs cannot convert a finding of positive economic benefit into a negative one. Lastly, GMP points to PSB Rule 5.409, which requires notice to the Board and parties in a Section 248 proceeding when a project's estimated capital costs increase by 20%, to support its assertion that the 13% increase in project capital costs is not significant enough to warrant additional process.[38]

GMP responded to the Department's comments on July 1, 2011. According to GMP, the increase in capacity factor is due to the increase in rotor diameter from 90 meters to 112 meters, which in turn increases the rotor-swept area by approximately 55%, and allows the turbines to

34. Town Comments filed 6/20/11 at 1-4.
35. LMG Comments filed 6/21/1 at 3-6.
36. DPS Comments filed 7/1/11 at 1.
37. Filed 6/24/11.
38. GMP Response to Towns and LMG at 2-4.

generate more electricity in lower wind conditions and to reach maximum capacity at a lower wind speed than possible with the smaller rotor diameter.[39]

As an initial matter, we point out that the revised budget is not actually a required compliance filing and therefore our review and approval is not necessary. That said, the Petitioners should bear in mind that the project was approved based on certain economic assumptions about its cost-effectiveness and they must manage the construction and operation of the project in a prudent manner, including the selection of project components. If the Petitioners are correct that selection of the Vestas V112 will actually reduce the per kWH cost of energy from the project then their ratepayers will realize a benefit. However, if the Petitioners' projections turn out to be incorrect and the per kWH costs of the project rise beyond the projections upon which our approval was based due to imprudent decisions by the Petitioners, then recovery of those increased costs from ratepayers will be subject to challenge. Because the Board has the ability to disallow recovery of imprudently incurred expenses, the economic balance of the project is not altered by the selection of the V112 and the increased costs reflected in the revised budget. Accordingly, we do not believe it is necessary to establish any additional process to examine the revised budget and capacity factor filed by the Petitioners on June 6, 2011.

CONCLUSION

With the exception of the placement and construction of the OCAS tower as described above, the Petitioners' final design plans are approved. The Petitioners must file an amended blasting plan reflecting the additions we described above.

SO ORDERED.

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39. GMP Response to DPS filed 7/1/11 at 3-4. By letter filed July 12, 2011, the Towns responded to GMP's explanation regarding the increase in capacity factor. The Towns assert that GMP's claim is problematic because the Bird and Bat MOU with ANR could require a minimum cut-in speed for turbine operation, eroding GMP's claim that the V112 is efficient due to its ability to produce more power at lower wind speeds. GMP replied to the Towns' argument by letter filed July 12, 2011, stating that the capacity factor analysis it performed for the V112 accounted for operational curtailments in the form of a minimum cut-in speed consistent with the Bird and Bat MOU.

Dated at Montpelier, Vermont, this 19th day of July, 2011.

s/James Volz)	
)	PUBLIC SERVICE
)	
s/David C. Coen)	BOARD
)	
)	OF VERMONT
s/John D. Burke)	

OFFICE OF THE CLERK

FILED: July 19, 2011

ATTEST: s/Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.